

Digital transformation: an inevitable necessity in the light of the Arab economic growth in telecommunications sector**- Algeria Telecom Corporation as a Case study**

التحول الرقمي ضرورة حتمية في ظل النمو الاقتصادي العربي لقطاع الاتصالات

دراسة حالة مؤسسة اتصالات الجزائر

Nabila Mimoune ¹, Okba Mairif ²

¹ Laboratory of economic strategies and policies in Algeria, University of M'sila- M'sila (Algeria), nabila.mimoune@univ-msila.dz

² Laboratory of economic strategies and policies in Algeria, University of M'sila- M'sila (Algeria), mairif.okba@univ-msila.dz

Received : 17/07/2023**Accepted : 30/09/2023****Published : 30/09/2023****Abstract:**

This study aims to identify an important topic about the economic corporation, and it's the current topic in investment and economy. It's the digital transformation as an inevitable necessity in the light of the Arab economic growth in telecommunications sector. Through this study, we will review Algeria Telecom Corporation, as a case study, in order to answer the following question: what does Algeria Telecom Corporation provide in the context of the digital transformation process to keep pace with the Arab economic growth in telecommunications sector?

The study has attained a set of results; the most important of them is that There is a trend towards the advancement of telecommunications sector in the Arab countries, in general, and in Algeria, in particular, which contributes to support the digital transformation process. This signifies that there is an impact of the application of information and communication technology on the wanted digital transformation policies in Algeria and in the Arab countries. Algeria Telecom corporation Also looks for keeping pace with modern technologies in the field of digitizing its commercial transactions, and it provides many services and various digital transactions in the context of the digital transformation process, as a strategy to keep pace with the Arab economic growth in telecommunications sector. The digital transformation with Algeria Telecom corporation remains in its infancy, and great efforts are waiting for the company to reach 100% of digital transactions.

Key words: Digital transformation, economic growth, Algeria Telecom Corporation, Arab market, telecommunications sector.

JEL Classification Codes : O43, M15, M21, L19, N22

ملخص:

تهدف هذه الدراسة إلى التعرف على موضوع مهم للمؤسسة الاقتصادية وحديث الساعة في الاستثمار والاقتصاد، وهو التحول الرقمي كضرورة حتمية في ظل النمو الاقتصادي العربي لقطاع الاتصالات، وسنستعرض من خلال هذه الدراسة حالة مؤسسة اتصالات الجزائر، بغية الإجابة على سؤال مفاده ماذا قدمت مؤسسة اتصالات الجزائر في سياق عملية التحول الرقمي لمواكبة النمو الاقتصادي العربي لقطاع الاتصالات؟

Corresponding author: nabila mimoune, e-mail: nabila.mimoune@univ-msila.dz

Digital transformation is an inevitable necessity in light of the Arab economic growth of the telecommunications sector_ Algeria Telecom Corporation as a case study

توصلت الدراسة إلى جملة من النتائج أهمها وجود توجه نحو النهوض بقطاع الاتصالات في الدول العربية ومنها الجزائر على وجه الخصوص، والتي تساهم في دعم عملية التحول الرقمي، وأن هناك أثر لتطبيق تكنولوجيا المعلومات والاتصال على سياسات التحول الرقمي المنشودة في الجزائر والدول العربية. كما أن مؤسسة اتصالات الجزائر تسعى لمواكبة التكنولوجيات الحديثة في مجال رقمنة معاملاتها التجارية، وقدمت العديد من الخدمات والمعاملات الرقمية المتنوعة في سياق عملية التحول الرقمي كاستراتيجية لمواكبة النمو الاقتصادي العربي لقطاع الاتصالات، ويبقى التحول الرقمي لدى اتصالات الجزائر لا يزال في مهده، وأن جهودا كبيرة تنتظر الشركة لبلوغ 100% من التعاملات الرقمية.

الكلمات المفتاحية: تحول رقمي، نمو اقتصادي، مؤسسة اتصالات الجزائر، سوق عربية، قطاع الاتصال.

تصنيفات JEL : M21, M15, O43, L19, N22.

INTRODUCTION:

Recently, the world witnesses fast and stunning developments and transformations in various fields, especially those related to digital smart systems and tools and artificial intelligence. Digital transformation has many varied benefits, not only for customers and the public, but also for governmental institutions and economic companies of all kinds. It saves cost and efforts to reach the desired goals efficiently and effectively. It improves the efficiency of human and intellectual resources, and creates tremendous work dynamism. It helps to improve quality standards in work and production, and works with its techniques and tools on Simplifying procedures for obtaining services provided to beneficiaries.

Some recent studies confirm that digital transformation contributes to expand the circle of development, innovation and progress, especially in those areas and sectors whose growth and development are closely related to their use of information and communication technology, in which digital transformation is one of the most important drivers and catalysts for their growth, including telecommunications companies, in general, and governmental telecommunications companies, in particular. In the light of the intense competition between governmental telecommunication companies and private ones, including Algeria Telecom Corporation, the field of study we deal with shows that the global and the regional competition and developments impose on it the inevitability of development, innovation and digital transformation, in order to ensure its strong presence in the market and maintain its market share as well as survival and continuity.

The research problem:

- What does Algeria Telecom Corporation provide in the context of the digital transformation process as a strategy to keep pace with the Arab economic growth in telecommunications sector?

The study hypotheses:

To answer the problem, we will try to examine the following hypotheses:

- There is a trend towards advancing the telecommunications sector in the Arab countries, including Algeria, which contributes to supporting the digital transformation process.
- There is an impact of the application of information and communication technology on the desired digital transformation policies in Algeria and the Arab countries.

- Algeria Telecom seeks to keep pace with modern technologies in the field of digitizing its commercial transactions, and it has provided many services and various digital transactions in the context of the digital transformation process, as a strategy to keep pace with the Arab economic growth of the telecommunications sector.
- The digital transformation of Algeria Telecom corporation remains in its infancy, and great efforts await the company to reach 100% of digital transactions.

The study methodology:

In order to answer these questions, the descriptive approach is used. This allows us to collect and analyze data, according to the study requirements. Then, a set of analyses and results have to be attained for the sake of answering the study hypotheses.

The study objectives:

The main objectives of this topic are listed as follows:

- Identifying the concepts related to the topic, especially the concept of digital transformation, its tools and economic impact.
- Providing an overview about the growth of telecommunications market in some Arab countries and in Algeria, in particular, through presenting some important indicators and figures.
- Learning about the digital transformation dynamics and the organization of information and communication technology in the Arab countries' region.
- Giving a simplified analysis and data evaluation that reflect the processes of advancing the telecommunications sector in the Arab countries, including Algeria in particular, and knowing the contribution of these processes and changes to support the digital transformation process.
- Knowing the impact of the application of information and communication technology on the desired digital transformation policies in Algeria and the Arab countries.
- Presentation of digital services and commercial operations provided by Algeria Telecom Corporation through which it seeks to keep abreast of developments and modern technologies, as a strategy for digital transformation, which becomes an inevitable necessity in the light of the Arab economic growth of the telecommunications sector.

Study content :

- Theoretical Framework for digital transformation
- An overview of the growth of the telecommunications market in some Arab countries including Algeria
- Digital transformation and ICT regulation in the Arab countries' region
- Algeria Telecom Corporation as a case study

1- Digital transformation theoretical framework

1-1- The concept of digital transformation and economic growth:

Digital transformation is defined as the process through which companies move to business models that rely on digital technologies to support the development and the innovation of the products and the services they offer, and to provide new marketing channels and job opportunities that increase the value of their products be it goods or services. (Ismail. a. SH, 2022, p 405).

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It's defined by IDC company as it is the continuous process through which organizations adapt to the requirements of their customers and markets (external ecosystem) through employing digital capabilities to innovate new business models, products and services that seamlessly blend digital and manual business and customer experiences while improving operational efficiency and organizational performance meanwhile. (Slaimi and Bouchi, 2019, p:948).

has pointed out that digital transformation does not only mean the shift towards the use of technology within the company's borders, but rather it is a comprehensive program that includes the company as a whole mainly in terms of working methods internally and externally and in terms of providing services to the target audience to provide services easily and quickly, so digital transformation drives companies to change their business models and adapt to the market realities. (Fari, l.s, 2021, p35).

According to the aforementioned, it can be said that digital transformation is an approach that the organization follows within its strategy to move from traditional work that relies on providing service with the help of the human factor to focus on providing service in automated ways and the modern means provided by technology so that it provides services at the level of customer aspirations.

Economic growth reflects the permanent increase in goods and services by the individual in his or her economic surroundings, reflecting the quantitative increase in income and national output, which also extends to the sustained increase in the population, which may lead to the problem of reconciling welfare with increased production during the gradual transformation of the economy (Bendehiba, 2023, p : 251)

1-2- Some technologies contribute to the implementation of digital transformation:

1-2-1- 5G Technology:

5G is the fifth generation of telephone networks, which aims to speed up all activities that depend on Internet connection, and is considered a new standard for wireless networks that include the previous four generations of network.

The 5G technology allows the construction of a network that was originally designed to connect all people virtually. In addition to that, it includes the rapid connection of all machines, devices and other tools.

This technology focuses on providing the largest amount of data GPS Multiplexers, faster speeds, greater reliability, less delay network with greater capacity, and increased data availability.

Besides, users will gain a greater experience while using the fifth generation technology. Because of its high efficiency and enhanced performance, it will be able to attract more people by supporting new areas. (Sulaiman, 2022)

1- 2-2 Automation:

The term automation was coined in 1946 in the automotive industry to describe the increased use of automated devices and controls in mechanized production lines. The origin of the word is attributed to (D. s. Harder), who was the director of engineering at Ford Motor Company at that time.

The term is widely used in the context of manufacturing, but has also been applied in other contexts including connection with a variety of systems in which there is a significant substitution of mechanical, electrical or computerized labor by human effort and intelligence.

In general, automation can be defined as a technology that is concerned with executing

a process through programmed commands with an automatic control of feedback to ensure the correct implementation of instructions and that the resulting system is able to work without human intervention.

The development of this technology has increasingly become dependent on the use of computers and computer-related technologies, so automated systems have increasingly become complex. However, these advanced systems represent a high level of ability and performance that exceeds the capabilities of humans to accomplish the same activities in many domains .(Asim, 2018)

In marketing, automation means Create a more systematic approach to marketing that you can track and monitor. When you use an all-in-one tool like HubSpot, you get full visibility of your efforts as a whole and even more that how your efforts paid off. It allows you to easily attract new users, convert them into leads and nurture them through the sales funnel. There are no surprises along the way or missing connections without realizing it. With the use of automation, business owners find that they can shift their marketing to a more data-driven and scalable approach. (Smith, 2020, p. 33)

1-2-3 Cloud Computing:

It is a term referring to the computer resources and systems that are available on demand via the network. They can provide a number of integrated computer services without being restricted by local resources, in order to facilitate it to the user. For remote printing, when the user is connected to the network, he can control these resources through an easy software interface that facilitates and ignores many details and internal processes. (Wikipedia, 2022).

1-3- The economic impact of digital transformation

The 2018 ITU Global Study examined the economic impact of digital transformation using an endogenous growth model that relates gross domestic product to the constant stock of capital, labor force and the index CAF for system of environmental digital development. The approach taken in this case tested the economic contribution of a sample of 73 countries around the world (general digitization model). Then, the results have been divided into two groups of countries: those in the OECD and the non-member countries of the Organization for Economic Cooperation and Development. According to the general digitization model, it resulted in a 10 percent increase in the index CAF to develop the digital ecosystem; a growth of 1.3 percent in per capita GDP. When the sample was divided among the countries of the Organization for Economic Cooperation and Development and the non-member countries, the economic influence has increased in OECD countries compared to non-OECD countries, where the results were as follows: (ITU, 2020, p. 3)

- OECD countries: led to a 10% increase in the index CAF to grow the digital ecosystem to a 1.4 percent growth in per capita GDP.
- Non-OECD countries: 10% increase in the index CAF to develop the digital ecosystem to a 1.0 percent growth in per capita GDP.

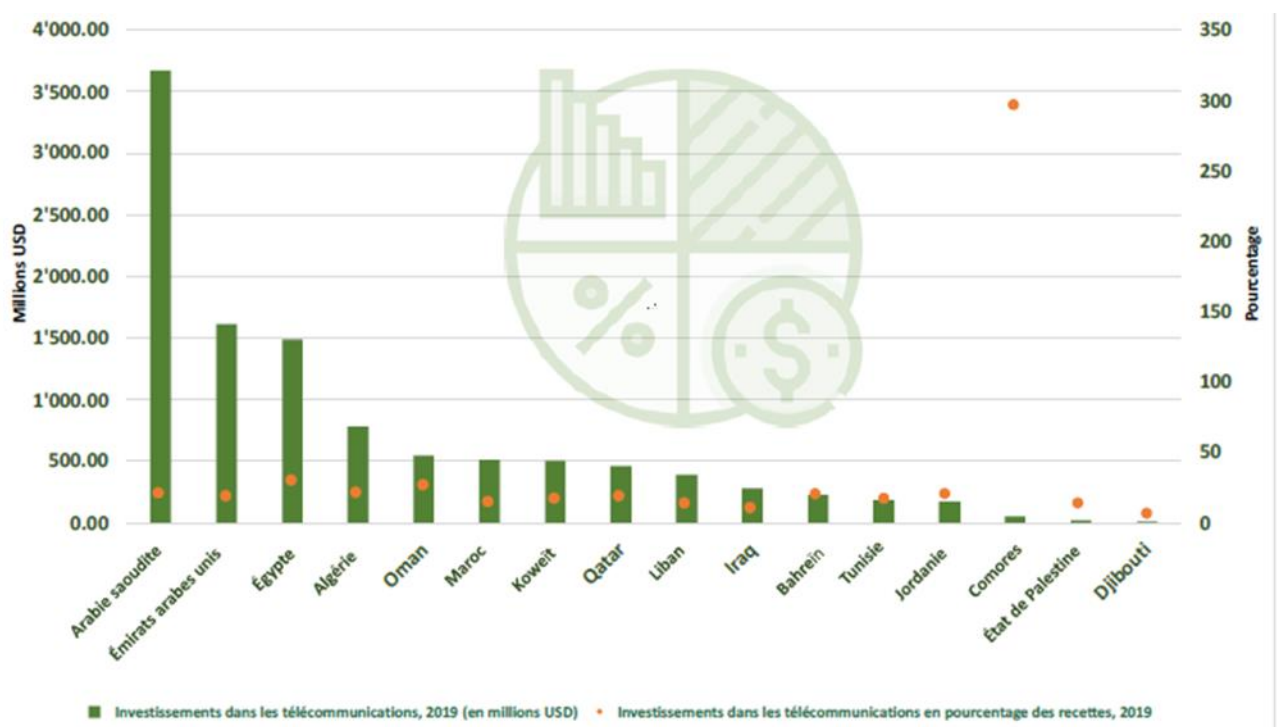
Furthermore, the pointed out model suggests that digitization also affects employment and total factor productivity, where an increase of the digitization index by 10 percent led to an increase in labor productivity by 2.6 percent and total worker productivity by 2.3 percent.

2- An overview about the telecommunication market in some Arab countries and in Algeria

The telecommunications sector plays an important role in shaping the digital transformation policy for many companies, because it is considered as the fundamental basis for information and communication technology. It provides the necessary tools to digitize businesses. Let's have an overview about the telecommunication market in Algeria and in some Arab countries.

2-1- Investments and revenues of telecommunications sector in the Arab countries:

Fig 1. The total investment in telecommunications and the proportion of the Arab countries' income for 2019.

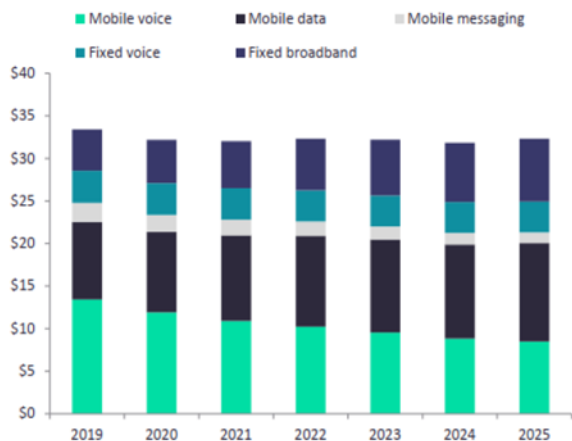


Source: Algérie télécom, Le secteur des Télécommunications Vue stratégique and economical in the monde, Cellule veille and Travaux suivi, 2021, P 63.

The available data from the International Telecommunication Union indicates that the total investment in telecommunications in the Arab countries' region reached US\$10.92 billion in 2019. Most of the investments were made by three countries: Saudi Arabia, the United Arab Emirates and Egypt, which accounts for nearly two-thirds of the countries' total investment in 2019. In the most countries, The level of investment, as a proportion of revenue, was between 10%and 20%. Although COVID-19 pandemic has affected the revenue of telecommunication companies, Growth is expected to return the next years when the companies carry on their investments In the region in the Mobile and fixed networks, especially in 5G. (ALGERIE TELECOM, 2021, p. 62)

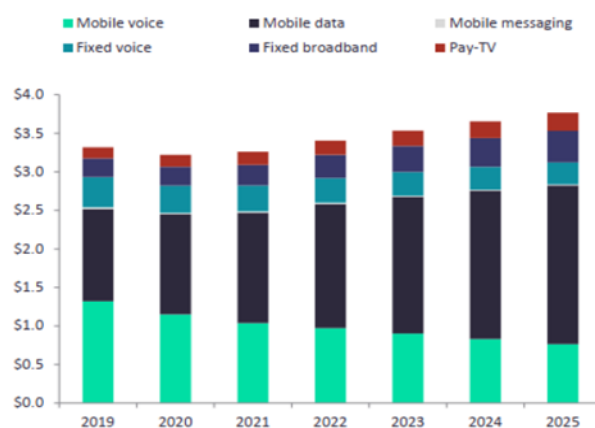
2-2- The growth of the telecommunications market in Algeria, Morocco and Saudi Arabia

Fig 2: Sales' size by category in Algeria



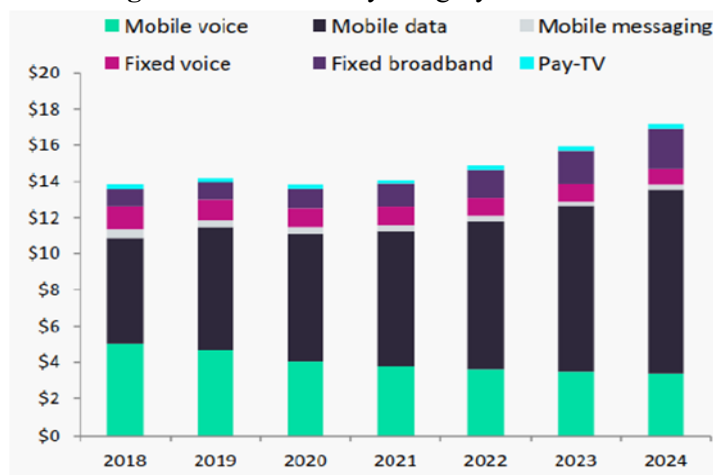
Source: Algérie télécom, Le secteur des Télécommunications Vue stratégique and economical in the monde, Cellule veille and Travaux suivi, 2021, P 68.

Figure 3: Sales' size by category in Morocco



Source: Algérie télécom, Le secteur des Télécommunications Vue stratégique and economical in the monde, Cellule veille and Travaux suivi, 2021, P 69.

Figure 4: Sales' size by category in the KSA

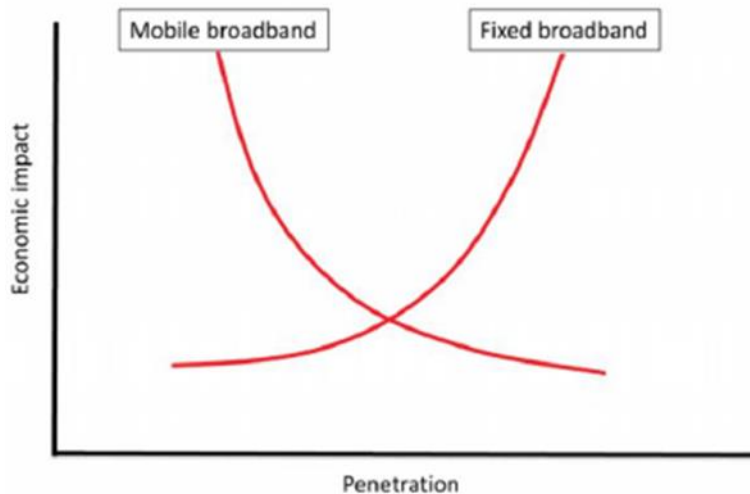


Source: Algérie telecom, Le secteur des Telecommunications Vue stratégique and economical in the monde, Cellule veille and Travaux suivi, 2021, P 69.

The income of the telecommunications market in Algeria for 2021 was about 3.22 billion dollar, and it's expected to reach \$3.23 billion in 2025, which represents a growth rate of 0.1% by 2025. The numbers are almost the same compared to Morocco, Except for the fact that it's expected to record a growth rate of 3.2% of revenues by 2025. Saudi Arabia's income is \$14.19 billion annually, That is a growth rate of 3.9% by 2025. (ALGERIE TELECOM, 2021, p. 68)

3- Digital Transformation and ICT Regulation in the Arab countries' Region

Figure 5: The economic contribution of fixed and mobile broadband penetration



Source: Algeria telecom, The Telecommunications Sector Vue strategic and economic in the monde, Cellule veille and Travaux suivis, 2021, P 64.

With no doubt, broadband, Digital transformation and ICT regulation contribute to economic and social development in the Arab countries' region. Therefore, the International Telecommunication Union conducted a study under the title “The Economic Contribution of Broadband, Digitization and ICT Regulation: Econometric Modeling for the Arab States Region », To assess the impact of fixed and mobile broadband and digital transformation on the overall economy of the region, As well as the extent to which institutions and regulations contribute to the development of the digital ecosystem. (ALGERIE TELECOM, 2021, p. 63).

*The economic impact of fixed broadband is related to standard returns; It is greater in high-income economies than in low-income economies.

* Mobile broadband has a greater economic impact; its contribution is greater in low-income countries than in middle-income countries and even in high-income countries.

*The regulatory and political framework has the same effect on the development of the digital ecosystem, regardless of the level of development or income.

3-1- The economic impact of fixed broadband:

The econometric model structure al is introduced. It consists of four equations, Evidence of the impact of fixed broadband on the economy between 2010 and 2017. Fixed broadband model shows general, applied to a sample of 139 nations,10 percent increase in the economy. The model indicates that Fixed broadband penetration leads to a 0.8 percent increase in GDP per capita, And this sample is classified into Three groups (high-, middle- and low-income countries) to determine whether the contribution of fixed broadband to GDP has increased or decreased with the level of economic development. So, the results are: (ALGERIE TELECOM, 2021, pp. 64-65)

*Countries with a per capita GDP of more than 22,000 USD (50 nations),A 10 percent of

increase in fixed broadband penetration, which makes GDP growth increase with 1.4 percent.

*Countries with a per capita GDP between 12,000 and 22,000 US dollars (26 countries); a 10 percent increase in fixed broadband penetration, which increases GDP growth with 0.5 percent.

*Countries with a per capita GDP of less than 12,000 USD (63 countries); The incidence of fixed broadband is similar to that of middle-income countries (a 10 percent increase in fixed broadband penetration led to a 0.5 percent increase in GDP growth), but it was not statistically significant.

3-2- The economic impact of mobile broadband:

The Global Study published by the International Telecommunication Union in 2018 also shows that mobile broadband has a greater impact on the global economy than fixed broadband. Based on a structural model applied to a sample of 139 countries (general mobile broadband model), It is estimated that a 10 percent increase in mobile broadband penetration results in a 1.5 percent increase in GDP. With the use of these data sets (high, middle and low-income countries), to assess the economic impact of mobile broadband, it was found that the level of economic contribution of mobile broadband is higher in low-income countries than in those of high-income. (ALGERIE TELECOM, 2021, p. 65)

* High-income countries: No economic effect was observed.

*Middle- income countries: A 10 percent increase in mobile broadband penetration leads to a 1.8 percent increase in GDP.

*Low-income countries: A 10 percent increase in mobile broadband penetration led to an increase of 2 percent in GDP.

This difference is explained by the fact that consumers in high-income countries have easier access to broadband and Constant, while mobile broadband is the only technology available to the majority of consumers in low-income countries. Therefore, the contribution of mobile broadband remains marginalized in high-income countries, whereas it is very important in low-income countries.

4- Algeria Telecom Corporation as a case study

Algeria Telecom is the result of a set of reforms carried out by the Algerian state through separating the postal sector from telecommunications one. It came to light in 2003, and began its work as a company specialized in the field of information and communication technology.

Since 1999, the Algerian state has embarked on profound reforms in the postal and communications sector. These reforms were embodied in the enactment of a new law for the sector on August 2000. This law came to an end state monopoly on postal and transportation activities administratively and financially independent control authority and two dealers have been established; one of which is responsible for postal activities and postal financial services, represented by the “Algeria Post” corporation, and the second is represented by telecommunications «Algerian telecommunications.

4-1- The digital transformation of Algeria Telecom:

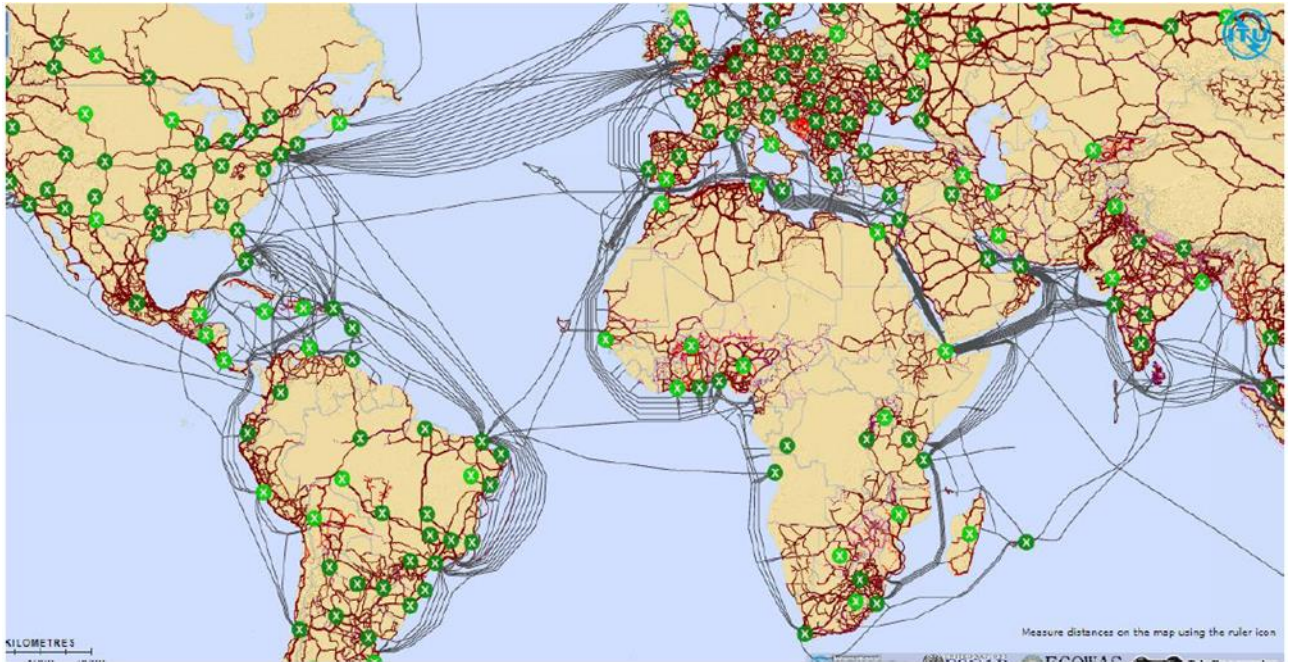
in December 2019 The Algerian government has officially announced the launch of the 770-kilometer submarine cable linking Algiers and Oran in Algeria to Valencia in Spain in cooperation with a telecom company. Algeria, the telecom infrastructure provider Isla Link

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and the French Alcatel Lucent Submarine To enhance international contact. The Algerian government has invested about \$30 million in the system cables, which has a maximum capacity of 40 terabytes per second.

The Algerian regulator also announced the completion of the deployment of a 75-kilometer cross-border optical fiber network linking Algeria and Mauritania in Africa, After deploying a 440-kilometer terrestrial fiber-optic link to Niger and West Africa.

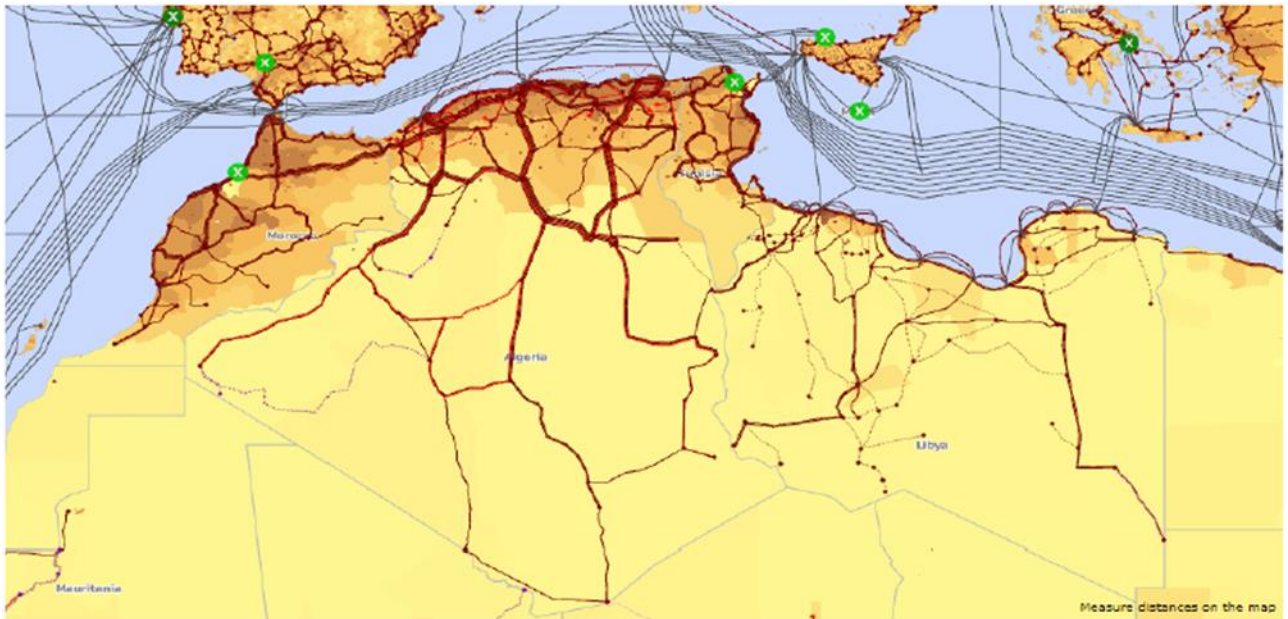
Fig 6: the global terrestrial network



Source: Algérie telecom, Mondiale de transmission terrestre, Journal Pole Infrastructures et réseaux, Cellule Veille et suivi des travaux UIT, P 11.

On June 2020, the Algerian government formed a ministerial committee with the aim of improving the quality of telecommunication services that it provides companies in sparsely populated areas of Algeria. The committee also examined the various technical, legal and economic aspects within the framework of Law 18-04 of May 2018 in terms of network infrastructure sharing, efficient use of resources, promotion of competition and investment in telecommunication infrastructure. (ALGERIE TELECOM, 2021, p. 74)

Fig 7: Telecommunication Network in Algeria



Source: Algérie telecom, Mondiale de transmission terrestre, Journal Pole Infrastructures et réseaux, Cellule Veille et suivi des Travaux UIT, P 10.

On marketing level, Algeria Telecom has intensified its activities in this field (digital transformation) through launching a range of new services and promotions that have been received with a great success by customers. It completed the approval of a bolder and more energetic strategy in terms of innovative performance on this field, which has strengthened its position and consolidated its brand image, which has positively affected its revenues. Nowadays, it offers the following services:

- - **Electronic payment using the golden card** for bills and topping up IDOOM Fixed phone accounts through the customer's space of Algeria Telecom. This service has a positive response across social networks, where the number of subscribers who use the electronic payment service has increased day by day since January 20, 2018.
- - **The electronic invoice of Algeria Telecom:** it's a new service launched on February 25, 2018 for LGB receipt. Billed every two months and straight across the account in the customer space. The customer can pay the required amount of money via this app.
- **Customer space service:(Espace Client)** It is a web portal through which customer information can be known, and all transactions can be conducted electronically. Through this service, the customer can view the personal information related to his account, know the various landline and internet offers, know the amounts of the phone bill, and the number of days remaining in his ADSL and Fiber account. It is through the customer's space to subscribe to the service of bill Reception via SMS and email Notifications. So, various payment operations can be done electronically for phone, internet and 4G services, besides the ability to send complaints and messages via the service Je-signal.
- - **Idoom service:** The so-called packing backup is a service that allows customers, who have ADSL/Fiber subscriptions, to re-activate their online accounts for a period

of time 96 additional hours, just in case of their subscriptions expiration at night or during weekends or holidays, and is conducted through calling 1500 via landline or mobile phone (Mobilis, Ooredoo), and following the voice menu.

- - **Khalas service:** it's one of the electronic services provided by Algeria Telecom, where the customer can top up his account Idoom ADSL/Fibre and pay the Idoom Fixe phone bill at any time safely and through his current postal account, which reduces the burden of moving around to commercial agencies, and reduces time and effort, and eliminates cash transactions.
- - **E-Payment service:** Algeria Telecom is also facilitated with an E-Payment service allowing the customer to top up his Idoom ADSL/Fibre account simply through using recharge cards at any time. In addition to that, the company has put at the customers disposal the E-Payment space (espace Client service), which is available through App Store and Play Store. Payments can be easily made via mobile phone and Golden Card (Edhabia). So, Idoom ADSL, Idoom Fiber and Idoom 4G can be recharged using Packing cards and golden card (Edhabia).
- - **IVR Service 1500:** It is a voice server that can be accessed via fixed and mobile phones (Mobilis, Ooredoo) through calling 1500 and following the voice menu. It is a service dedicated to all customers, who have ADSL and 4G accounts, through which the previously mentioned accounts can be mobilized.
- - **mail mob service (AT Post) and WinPayBNA:** These two services are among the latest means of digital transformation on which Algeria Telecom relied to facilitate its electronic transactions with its customers. These two services enable Algeria Telecom customers to top up their Idoom ADSL/Fiber Or their landlines accounts Through the Postal Mobile application of the Algerian Post, or the application Win Pay BN Affiliated to the National Bank of Algeria. What distinguishes these two services is the easiness of transferring funds from the person's account to the account of Algeria Telecom without the need to withdraw money and reuse it in various payment operations. Through these apps, the client can view all telephone dues without calling the customer service number or any contact with commercial agencies.
- - **My Idoom Application:** Algeria Telecom has provided its customers with an application called My Idoom. It is an electronic application used on mobile phones, as it contains a variety of digital services, including: accessing the customer's space, making electronic payment operations, increasing the speed of Internet payments, carrying out backup operations, viewing the consumed bills for the fixed line and a record Payments, the ability to locate commercial agencies across the country.
- - **The Virtual Commercial Agency:** It is a new online service available 24/7 via the link Store.at.dz or by accessing the website Algeriatelecom.dz. This space allows the customer to view a wide variety of offers and services offered by Algeria Telecom, in order to save time and avoid visiting commercial agencies. It is worth noting that this service is available in 3D technology and 360°. It includes three spaces: a space for reception, a space dedicated to displaying devices and services marketed through a Idoom store, and an exclusive space. (Algeria Telecom, 2022)

- - **Elphorm platform:** Algeria Telecom launched the electronic product Elphorm, which is an online digital space that provides training courses for more than 1,400 courses by accredited managers and trainers in their field of specialty. This service can be accessed through the website www.elphorm.com. For reference, this product has begun to be marketed starting from 10/25/2022 at a price of 1250 DZD per month at all the commercial agencies of Algeria Telecom. (Algeria Telecom, 2022)
- - **Dorous.com Platform (online support):** This service contains rich and comprehensive contents for all lessons and exercises in several subjects that are compatible with the national education program for the primary, middle and secondary levels. The platform can be accessed through the website www.Dorouscom.com. The marketing of the platform was launched on 09/19/2022 at the level of commercial agencies. (Algeria Telecom,2022)
- - **ZIMAIL And ZOUMI services:** ZIMAIL is a collaborative business messaging service hosted on the ADEX cloud data center level in partnership with the US company Sinecure that owns Zimba. ZOUMI It is an Algerian platform for remote video lectures developed in cooperation with the American developer Zoom of high renown.

These services aim to provide the Algerian market with value-added service offers through the sales network of Algeria Telecom, which is spread across the entire national territory, while contributing to the development of locally hosted content through cloud storage services in Algeria. (Algeria Telecom,2022)

- - **Kaspersky and Kaspersky Safe Kids services:** Algeria Telecom launched a wide variety of digital products that aim to protect its customers from the dangers of the Internet. The company has started marketing this product since 08/10/2022 at the level of commercial agencies. To take advantage of this offer, the customer can conduct banking transactions and purchases and video games and sharing data via computers and mobile devices safely. Besides, Kaspersky Safe Kids Service allows parents to block access to dangerous and unwanted websites for children, in addition to controlling the time a child spends in front of the screen, and learns about his interests and his friends list, in order to ensure the best protection for him. (Algeria Telecom,2022)

4-2- Second main title: Digital transformation of Algeria Telecom customers:

In this paragraph, we will review some of the statistics that we have collected from the marketing information system of Algeria Telecom, with regard to electronic transactions conducted by the company's customers through the serviceIVR1500, Post AT and Espace Client throughout The last four months(August, September, October, November 2022). We tracked the number of customers who visited the commercial agencies across the national territory to obtain various services and those who used electronic means. The results have been as follows:

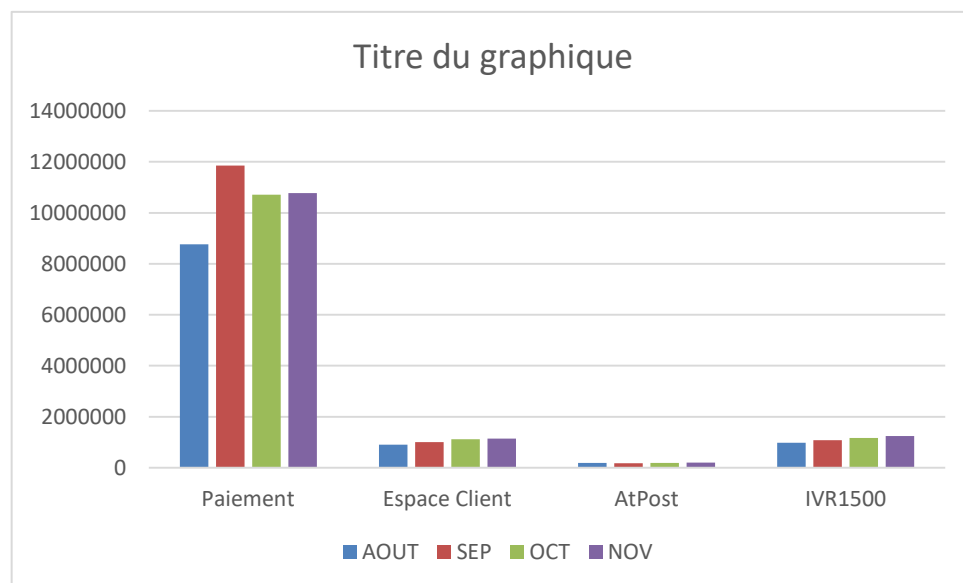
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Table 1: Statistics about traditional and digital transactions of Algeria Telecom customers

Total customers of electronic transactions	Customers who use Voicemail IVR 1500	Customers used the Postal Mob service AT Post	Customers used the customer space Space Client	Clients go to commercial agencies	To Day
2058480	973110	185,226	900144	8763441	August 2022
2260216	1076666	178417	1005133	11849810	Septembre 2022
2,466,598	1,169,714	182,739	1114145	10716503	Octobre 2022
2601081	1,248,194	204,938	1,147,949	10769458	Novembre 2022

Source: Prepared by researchers based on a marketing information system NGBSS Algeria Telecom

Fig 8: The rate of customers who used traditional transactions compared to customers who used electronic transactions within 4 months

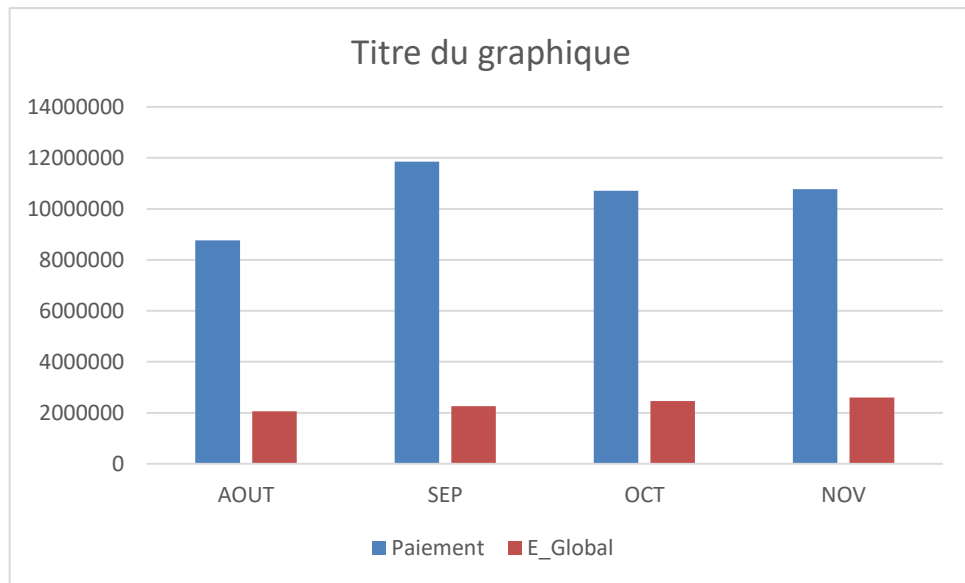


Source: Prepared by researchers based on a program Excel

The above figure shows that the Algeria Telecom customers tend to use traditional transactions, as the highest rate of customers who went to commercial agencies across the national territory was in the month of September 2022, with nearly 12 million customers. Whereas the payment process through the application of Client Space During the month of November has reached approximately 115,000 customers, which is the highest percentage compared to other months. The IVR service was used with a rate of 124,000 customers during the month of November, which is the highest percentage compared to the previous months. As for the use of the Postal Mob application, it was less than other electronic services by virtue of it being a prophetic new application, and it wasn't not widely spread among

customers. The highest rate of use of this application was recorded during the month of November with an average of 204,938 customers. After that, we collected the number of customers who used electronic transactions for the three applications and compared them with those who use traditional transactions. The result was:

Fig 9: The rate of customers who used traditional transactions compared to those who used electronic transactions within 4 months



Source: Prepared by researchers based on a program Excel

According to the above figure, we notice that traditional transactions are very high compared to the electronic ones. However, it is noted that there is a slight improvement in customer orientation towards electronic payment methods during the month of November compared to other months, which is a rather good indicator of the existence of a digital transformation among Algeria Telecom customers.

According to the aforementioned, it can be said that the digital transformation of Algeria Telecom is still in its infancy, and that great efforts await the company to reach 100% of electronic transactions. It's also noted that there is a discrepancy in the preferences of customers in choosing the appropriate digital medium, which opens horizons for researchers to know the behavior of Algeria Telecom customers in dealing with digital applications.

Conclusion

through this study, we've attempted to deal with an important topic for the Arab economic corporations, in general, and the telecommunications sector corporations, in particular, which is the digital transformation as an inevitable necessity in the light of the Arab economic growth of the telecommunications sector. We addressed the digital transformation and the organization of information and communication technology in the Arab countries' region. In addition to that, we present a set of facts and data about Algeria Telecom Corporation, as a case study, in order to answer the question: What does Algeria Telecom Corporation provide in the context of digital transformation process to keep pace with the Arab economic growth in telecommunications sector?

Results:

The study has attained a set of results, and the most important of them are listed as follows:

- Digital transformation is a planned approach followed by institutions of all kinds, especially those whose service quality is linked to technological development within their strategies to move from routine and traditional work that depends on producing services with the help of the human factor to focus on providing service in dynamic and effective ways, so that providing services at the level of customers' desires.
- There are many technologies helping the implementation of digital transformation, mainly 5G technology, automation and cloud computing. Through these technologies, any organization can grant to its users and customers greater experience, when using technology. In addition to that, efficiency and effectiveness and high performance would achieve greater development, growth and the ability to compete.
- Digital transformation helps economic corporations, especially telecommunications companies, to follow business models that rely on digital technologies to support development and innovation processes with offering products and services. It also helps corporations to provide new marketing and distribution channels and more profitable opportunities in the market.
- The Arab telecommunications market witnesses growth, development and the digital transformation has affected the telecommunication companies' revenues, especially those relying on the economic contribution of fixed and mobile broad band penetration. This development and growth will continue in the future in the light of the continuity of increase of investment in telecommunication companies in the Arab region.
- There is a trend towards advancing the telecommunications sector in the Arab countries, in general, and Algeria, in particular, which contributes to supporting the digital transformation process.
- There is an impact of the application of information and communication technology on the desired digital transformation policies in Algeria and the Arab countries.
- Algeria Telecom Corporation seeks to keep pace with modern technologies in the field of digitizing its commercial transactions, and has provided many services and various digital transactions in the context of the digital transformation process as a strategy to keep pace with the Arab economic growth of the telecommunications sector, and the digital transformation of Algeria Telecom remains in its infancy, and that great efforts await the company to reach 100% of digital transactions.

Suggestions:

According to the attained results, we can offer a set of suggestions that can be summarized as follows:

- Algeria Telecom's digital transformation is still in its infancy, and great efforts await the company to reach 100% of digital transactions. Therefore, the corporation must rely on a set of strategies through which it enhances its position in the Arab world and worldwide, including:
 - Fostering Arab and international partnerships that help to obtain modern technologies.
 - Supporting and financing innovations and emerging projects in the fields of digitization and artificial intelligence and the attempt to benefit from creative ideas and distinguished services.
 - Investing in creative human and intellectual capital through stimulating training and providing a conducive environment to innovation, hard work and optimal use of technological resources.
 - Trying to get closer to customers and understanding their needs, desires, complaints and problems, and trying to transform these problems into digital solutions and projects. The proposed value for these projects is commercial transactions, digital services and improved, developed and new smart tools.

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